

Chapter 17: Ecology.

Def: Ecology is the study of the relationship between living things, both with one another and with their environment.

Def: The environment is everything that surrounds an animal or plant.

Def: The habitat is the place where an animal or plant lives.



Fig. 3 / Woodland

There are several types of habitats that we can look at.



Fig. 4 A1

Seashore

Interdependence

Each habitat has its own environment. It has its own selection of animals and plants that are suited for that habitat.

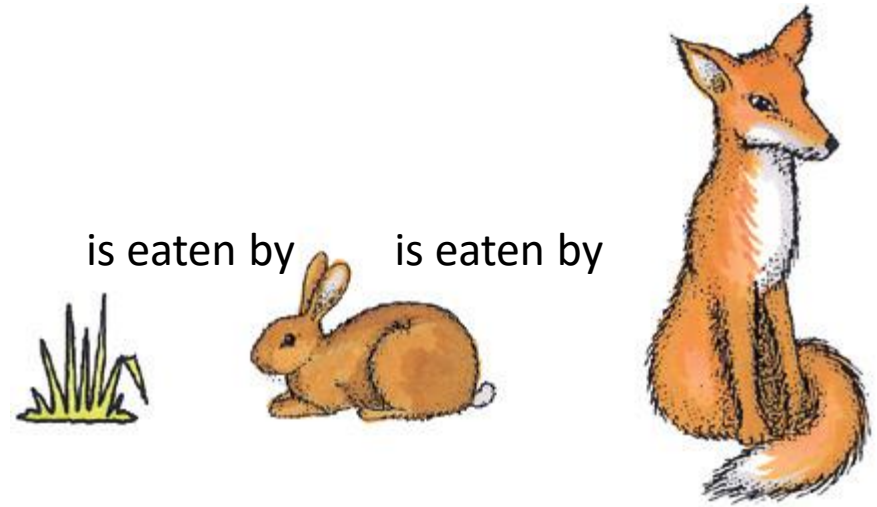
Plants and animals depend on each other for food, shelter and pollination.

Plants depend on other plants too. Large plants shelter smaller plants from the weather.

Some animals depend on other animals for food. e.g. Foxes eat rabbits.

Food Chains.

A food chain is a feeding relationship between living things.



A food chain must begin with a green plant.

Producer: Something that makes their own food. e.g. Green plants.

Consumers: Consume food. e.g. All other organisms.

Herbivore: Plant eaters. e.g. Rabbit, Giraffe

Carnivore: Meat eaters. e.g. Fox, Lion

(Decomposers: Feed on dead plants and animals. e.g. Earthworms.)

Food Webs.

A food web is a number of food chains linked together or interconnected.

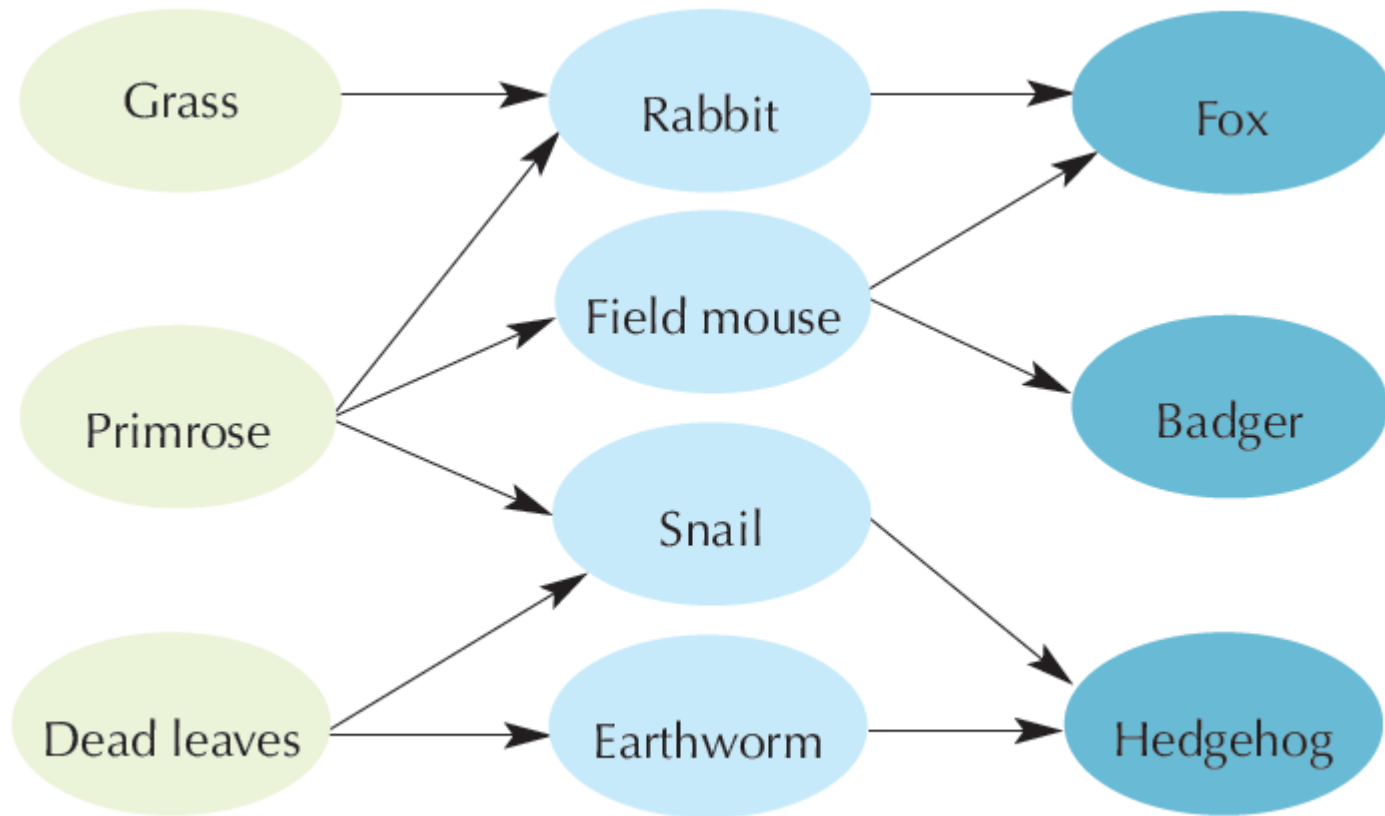
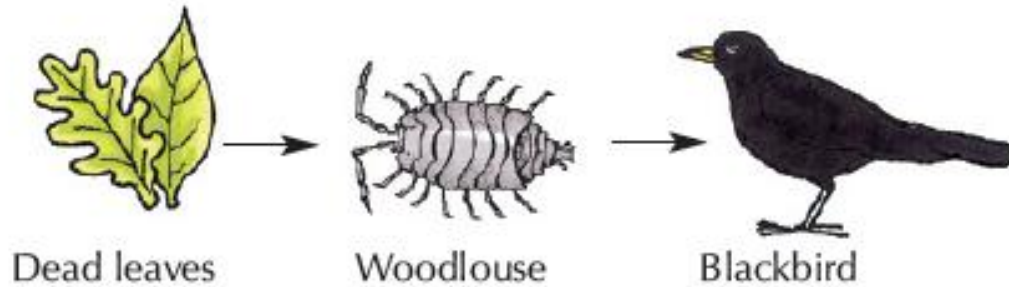


Fig. 9 A food web from a woodland habitat.

Feeding Levels.

The position of an organism in a food chain is called the feeding level.



First feeding level:

Second feeding level:

Third feeding level:

Dead leaves

Woodlouse

Blackbird.

Decomposers.

Decomposers feed on dead plants and animals. E.g. Bacteria, fungi, earthworm and other invertebrates.

They are consumers because they do not make their own food.

They are very important because they release minerals from the dead plant or animal back into the soil.

Energy Transfer in the Food Chain.

The energy for any food chain comes from the Sun.

Plants use the sun's energy to make food.

This energy is passed up the food chain as they eat each other.

But energy is lost because animals waste energy by running etc.

To overcome this and provide enough energy for everything, the number of organisms at the first feeding level is greater than the second level and so on...

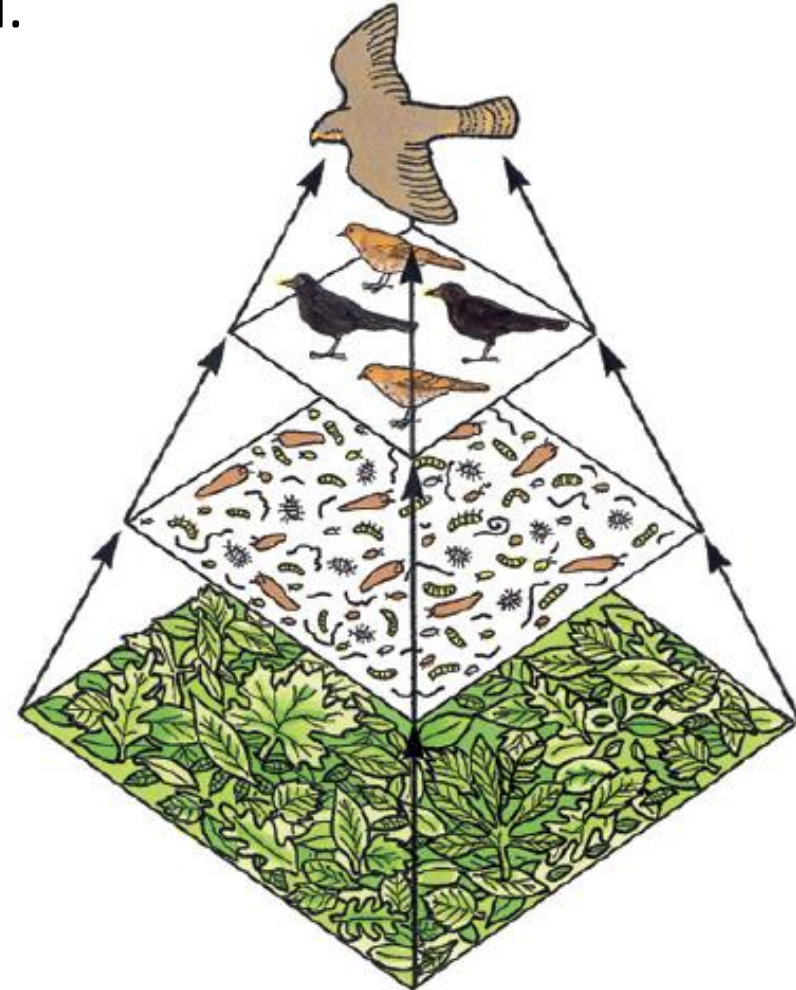


Fig. 8 A pyramid of numbers.